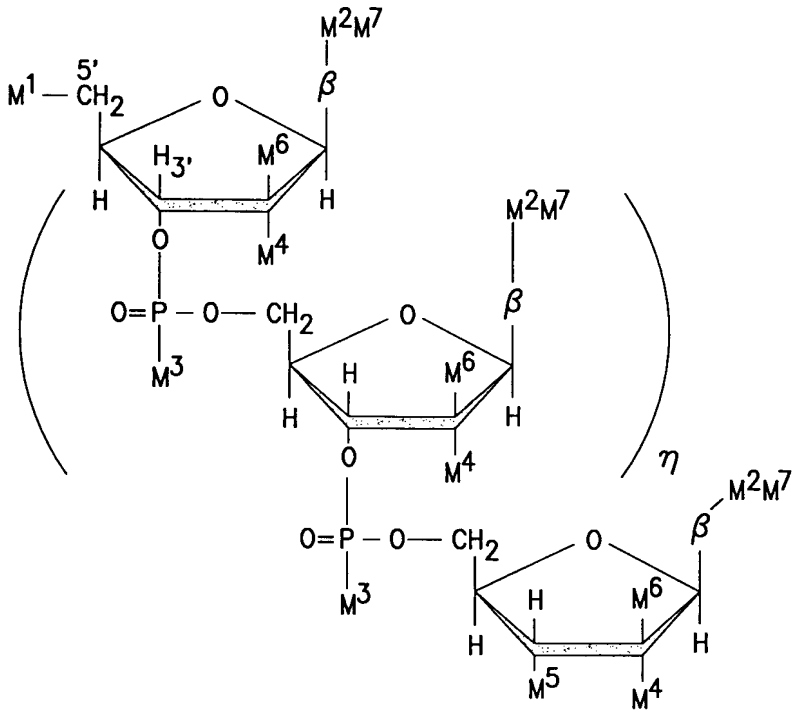


$\eta = 1-50$

M=H, OH, XR,
Halogen, N_3

FIG. IA

	M^1	M^2	M^3	M^5
Type Ia (base modified DNA)	OH	XR/Hal	OH	H
Type Ib (base modified RNA)	OH	XR/Hal	OH	OH
Type IIa (5'- modified DNA)	XR/Hal	H	OH	H
Type IIb (5'- modified RNA)	XR/Hal	H	OH	OH
Type III (3'- modified)	OH	H	OH	XR/Hal
Type IVa (P- modified DNA)	OH	H	XR	H
Type IVb (P- modified RNA)	OH	H	XR	OH

FIG. 1B

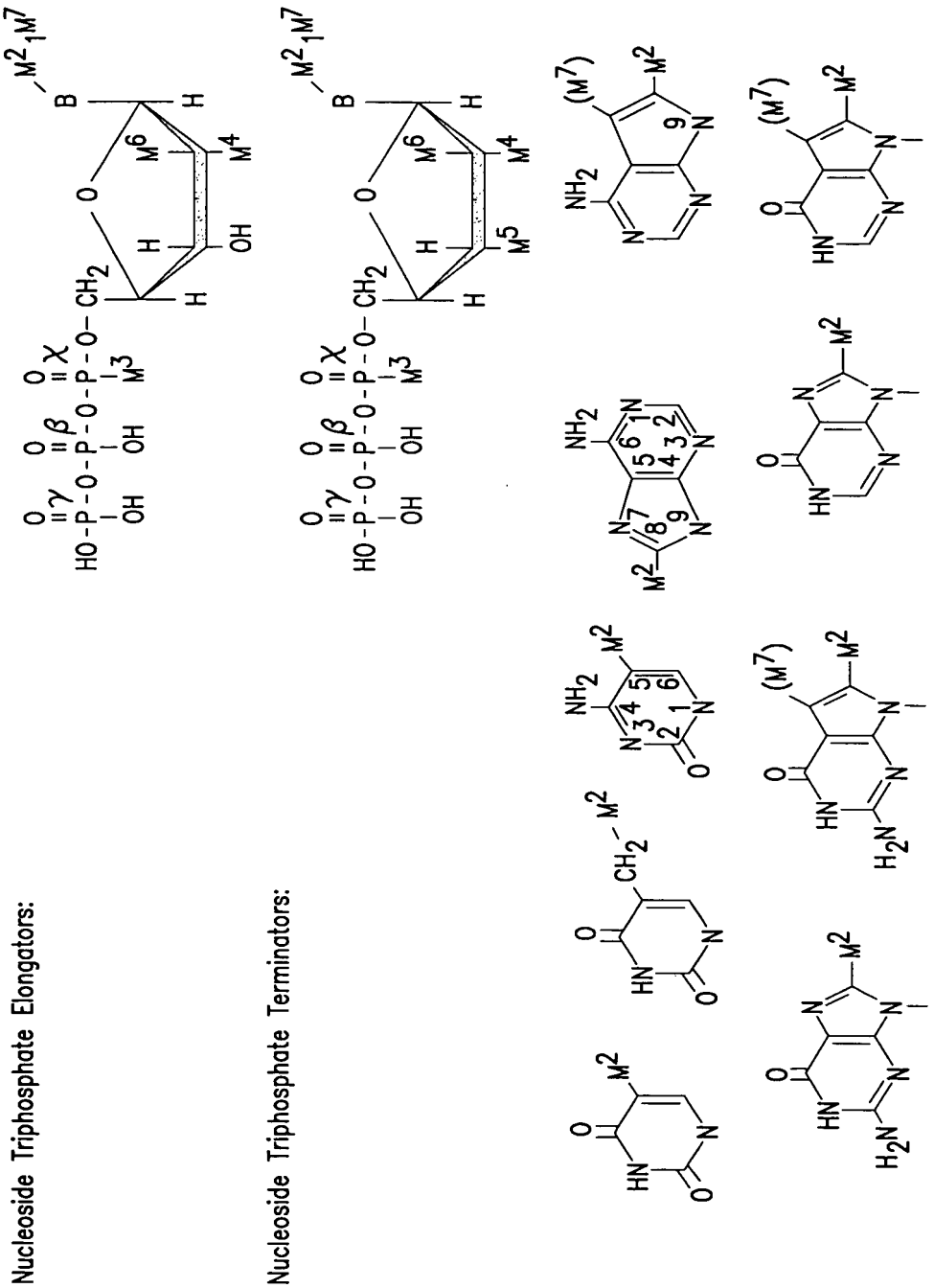
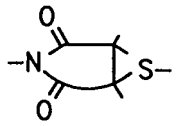


FIG. 2A

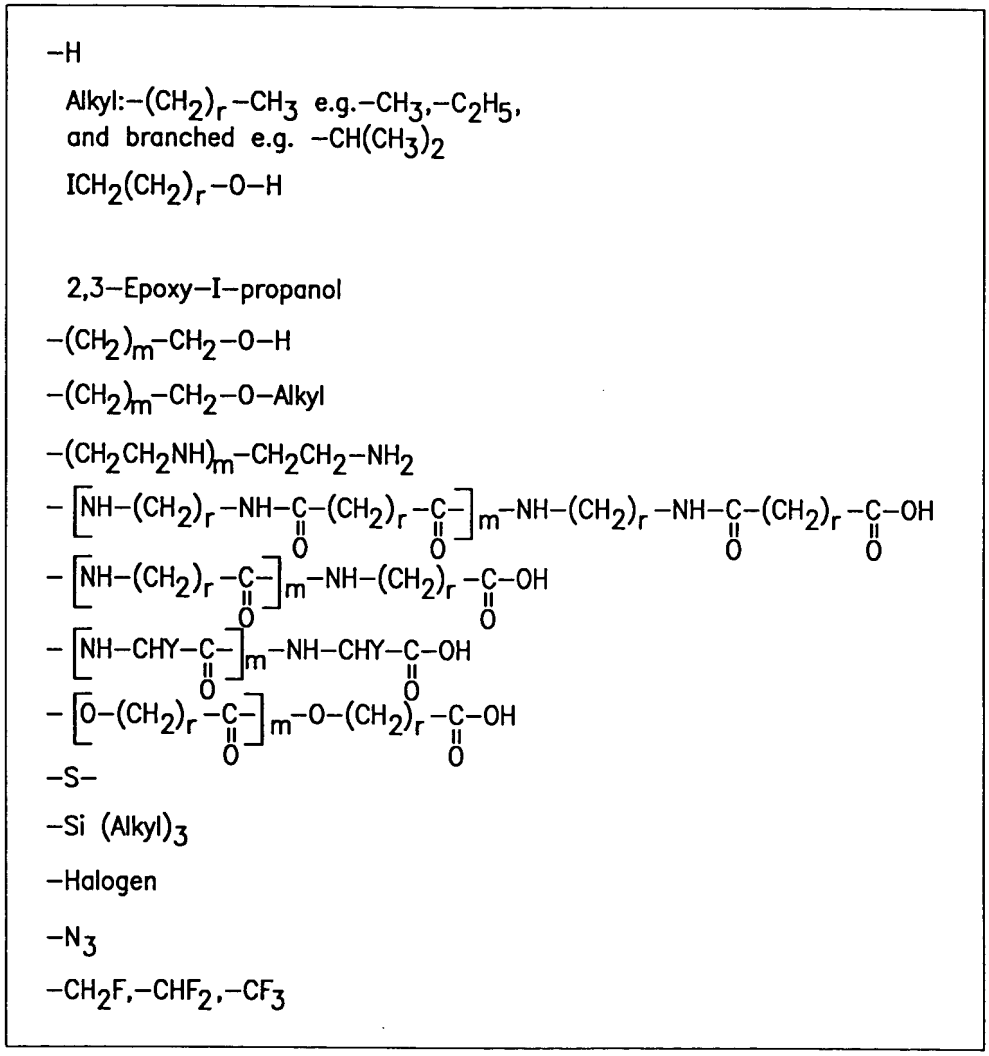
	M^2	M^3	M^4	M^5
Type A (DNA–Termination)	XR	OH	H	H
Type B (DNA–Termination)	H	OH	H	XR
Type C (DNA–Termination)	H	XR	H	H
Type D (RNA–Termination)	XR	OH	OH	H
Type E (RNA–Termination)	H	OH	OH	XR
Type F (RNA–Termination)	H	XR	OH	H

FIG. 2B

X	R
–O–	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
$-O-\overset{O}{\overset{\|}{C}}-(CH_2)_r-\overset{O}{\overset{\|}{C}}-O-$	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
$-NH-\overset{O}{\overset{\|}{C}}-/-\overset{O}{\overset{\|}{C}}-NH-$	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
$-NH-\overset{O}{\overset{\|}{C}}-(CH_2)_r-\overset{O}{\overset{\|}{C}}-O-$	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
$-NH-\overset{S}{\overset{\|}{C}}-NH-$	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
$-O-\overset{O^-}{\overset{\|}{P}}-O-Alkyl$	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
$-O-SO_2-O-$	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
$-O-\overset{O}{\overset{\|}{C}}-CH_2-S-$	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
–S–	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$
–NH–	$-(CH_2CH_2O)_m-CH_2CH_2-OH$ or $-(CH_2CH_2O)_m-CH_2CH_2-O-Alkyl$

m= 0, 1–200
r = 1–20

FIG. 3



m= 0, 1-200
r = 1-20

FIG. 4

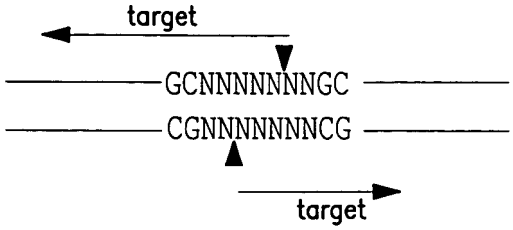


FIG. 5

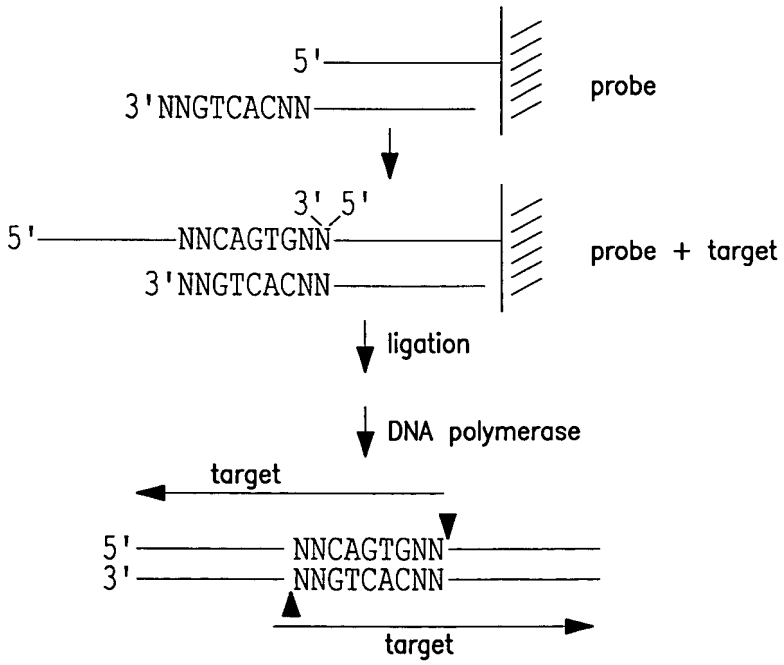


FIG. 6

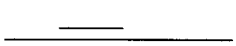
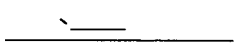
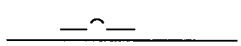
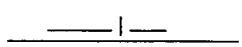
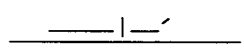
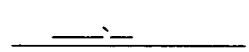
Nucleic Acid Structure	Calculated T_m (°C, average base composition) n= 8	7	6	5
	38	33	25	15
	33	25	15	3
	25	15	3	−14
	51	46	40	31
	46	40	31	21
	40	31	21	11

FIG. 7

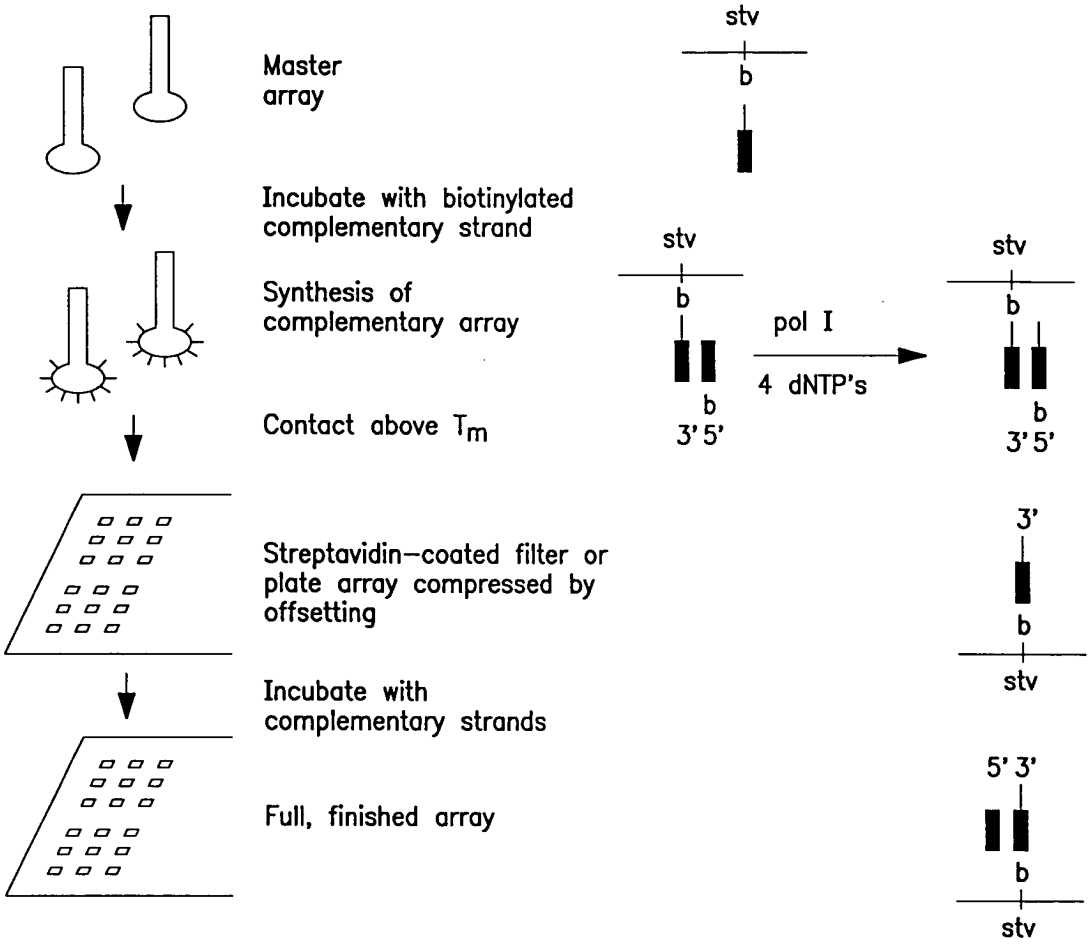


FIG. 8

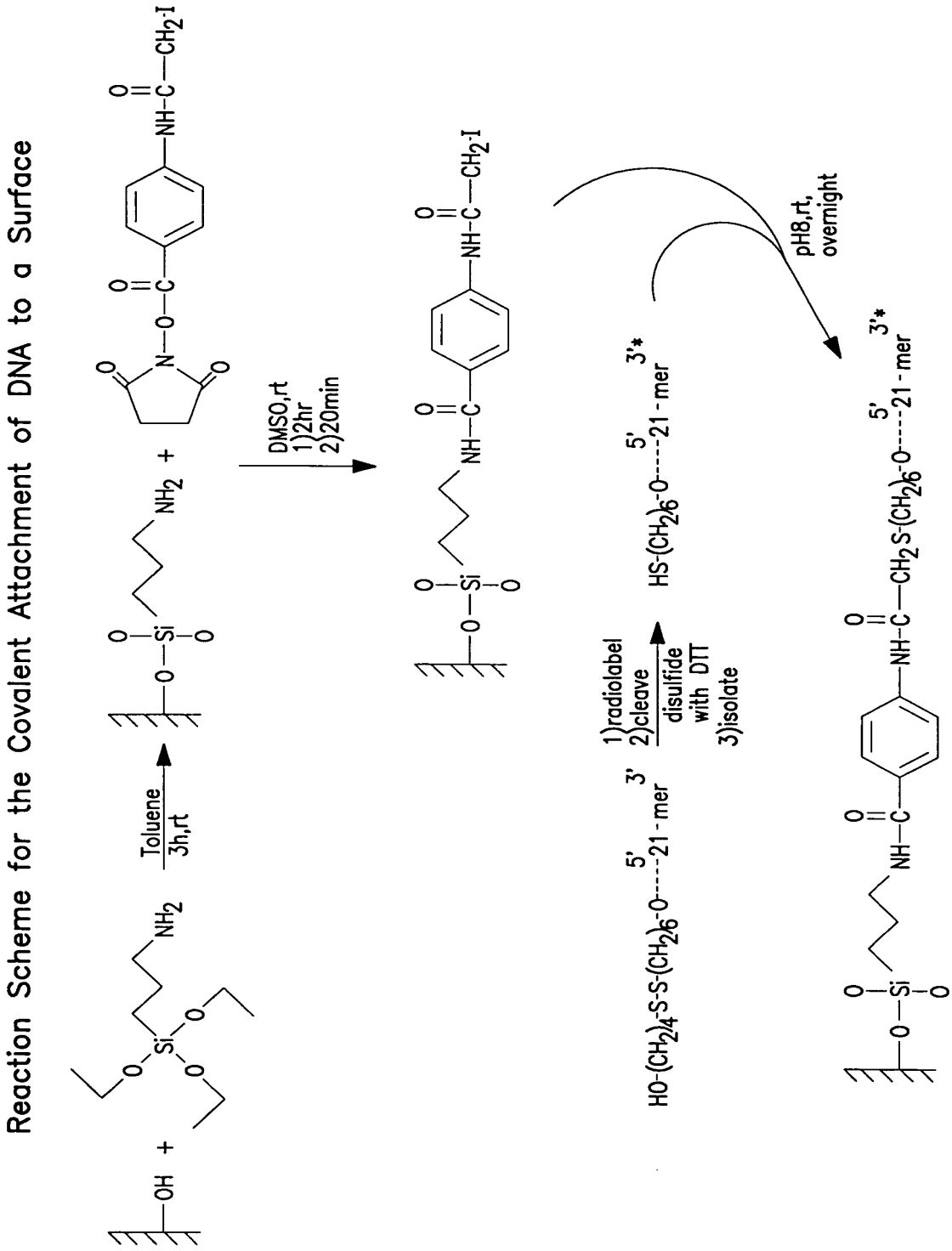


FIG. 9

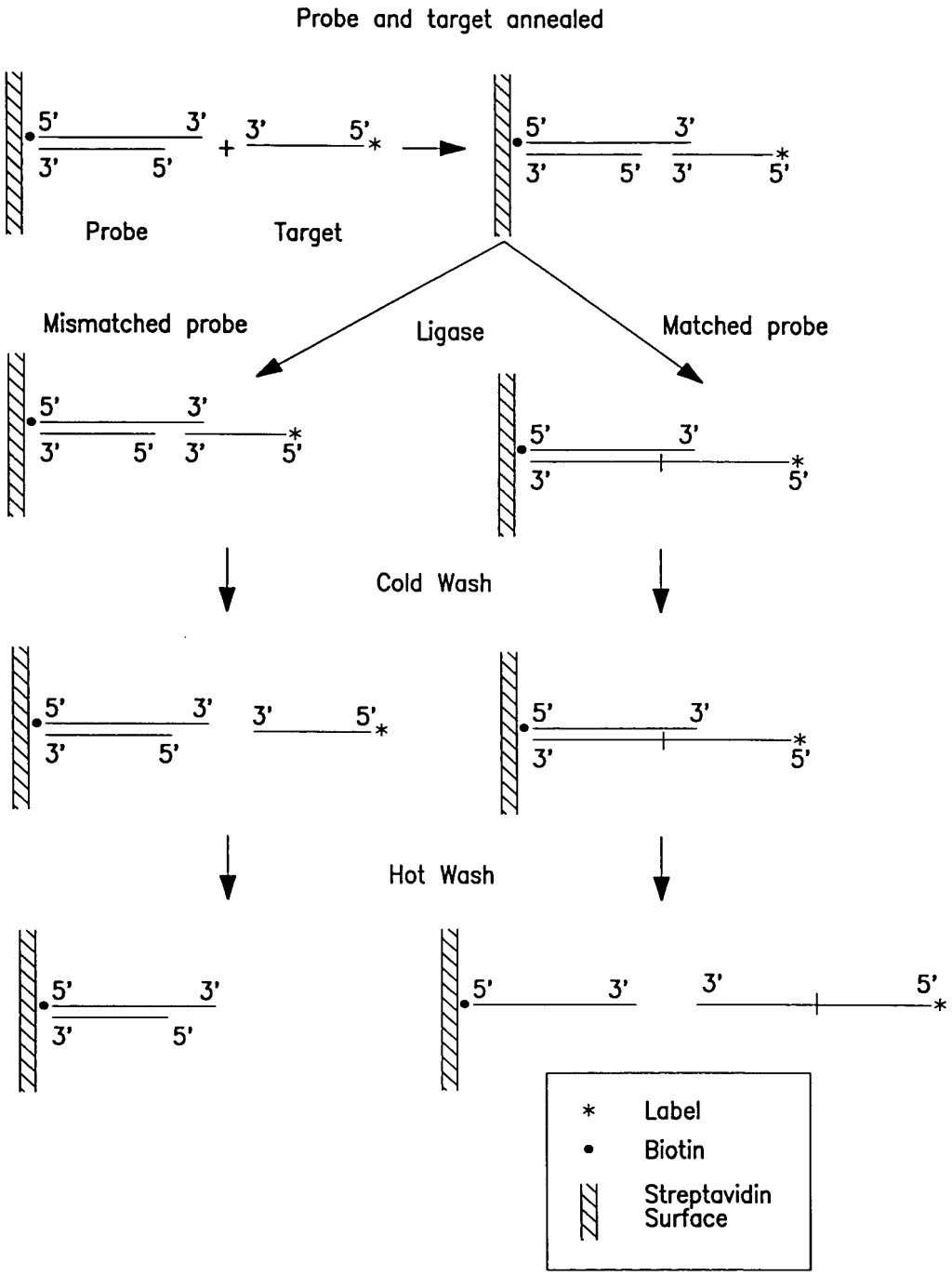


FIG. 10

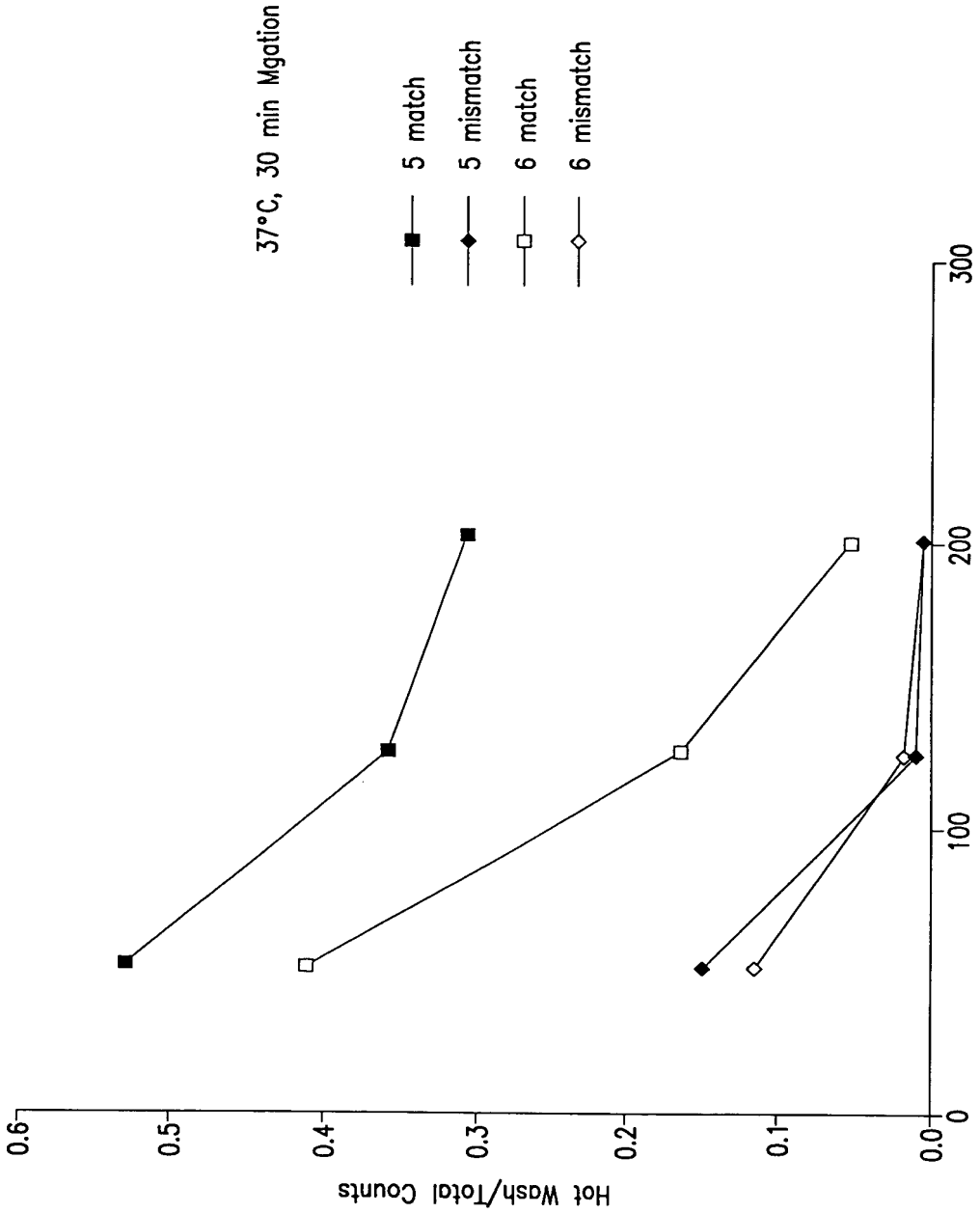


FIG. 11

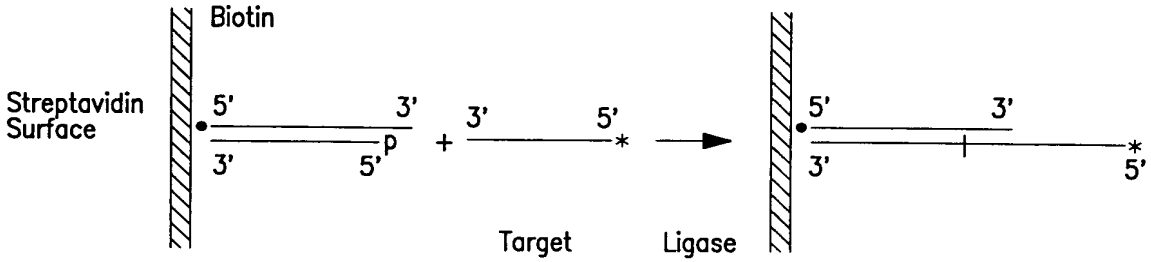


FIG. 12A

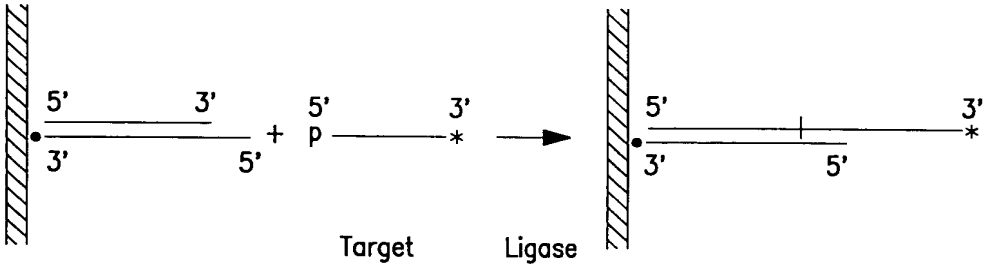


FIG. 12B

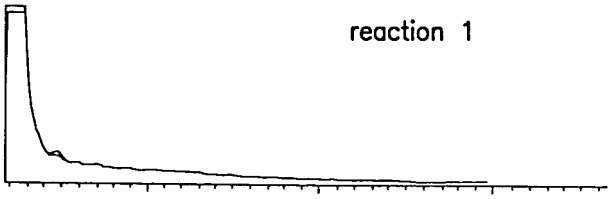


FIG. 13A

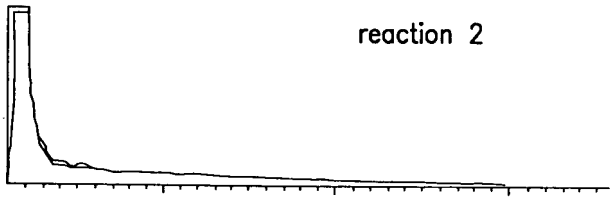


FIG. 13B

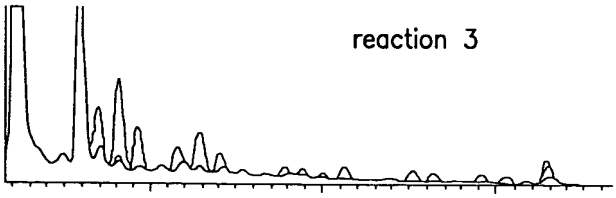


FIG. 13C

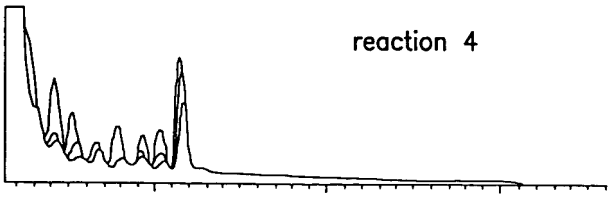


FIG. 13D

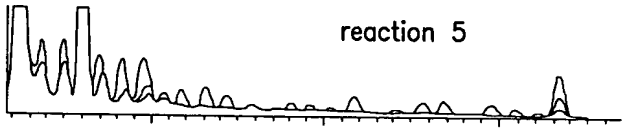


FIG. 13E

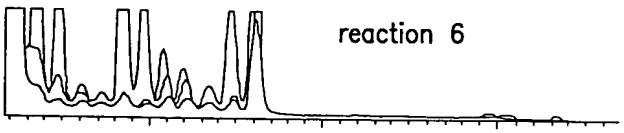


FIG. 13F

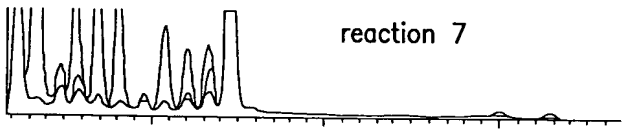


FIG. 13G

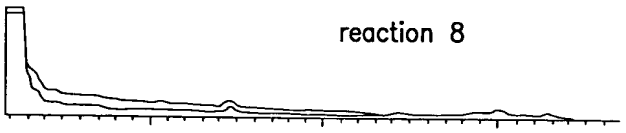


FIG. 13H

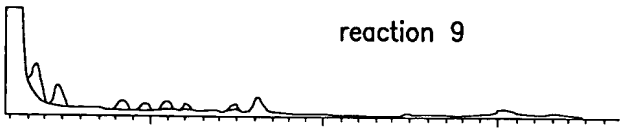


FIG. 13I

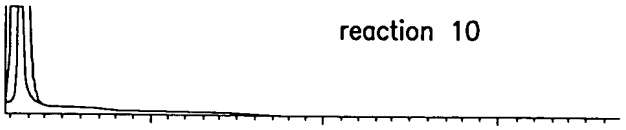


FIG. 13J

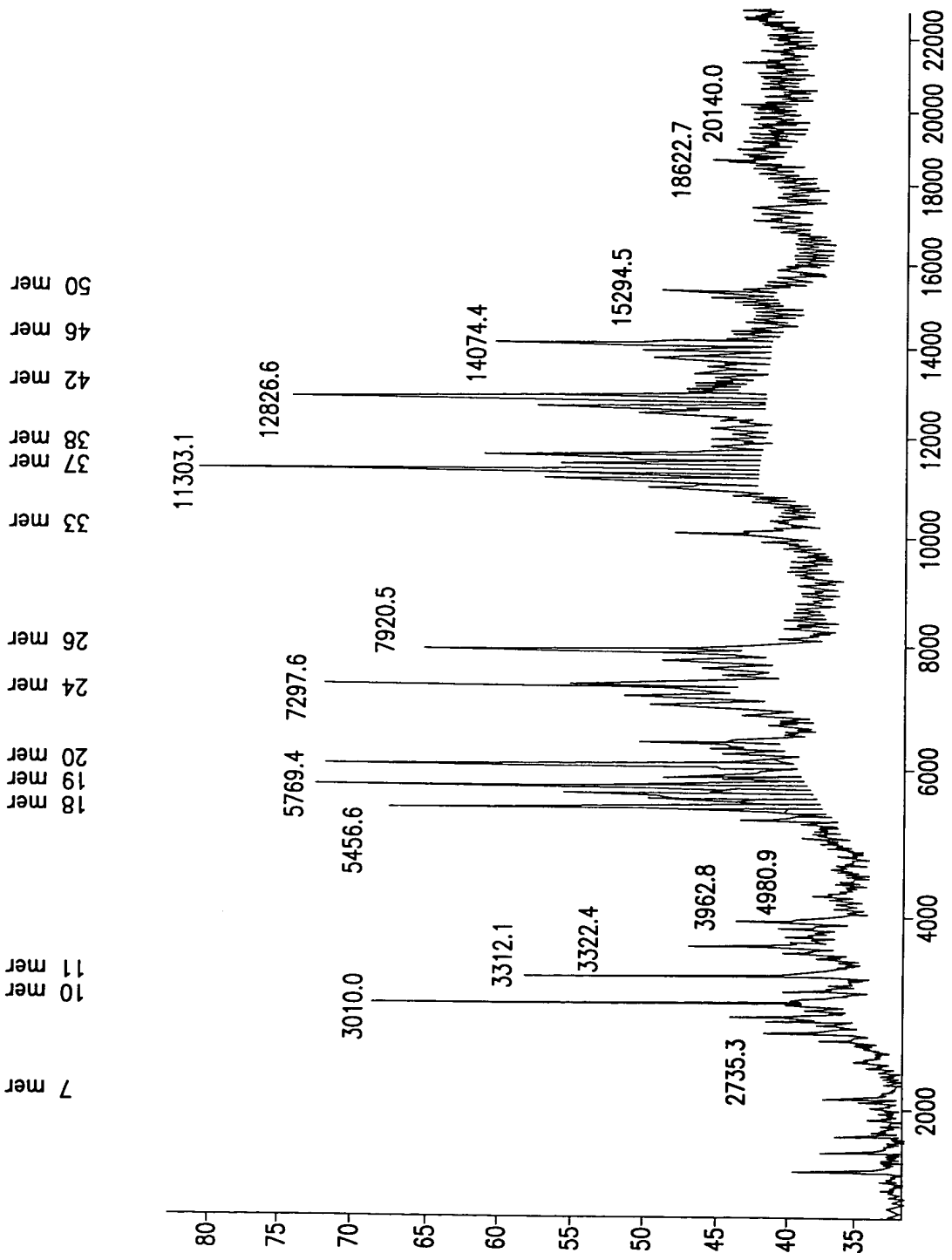


FIG. 14

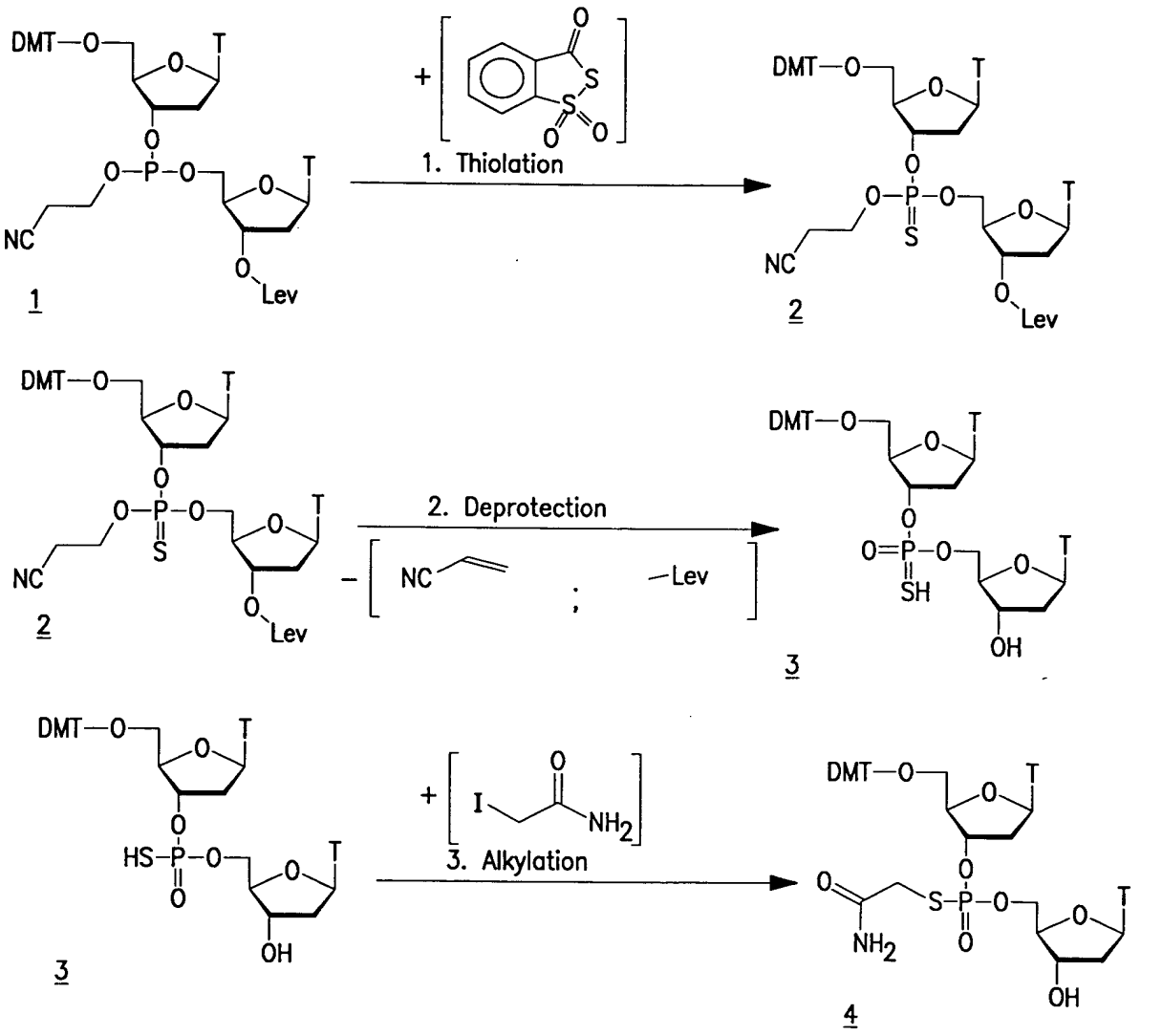


FIG. 15

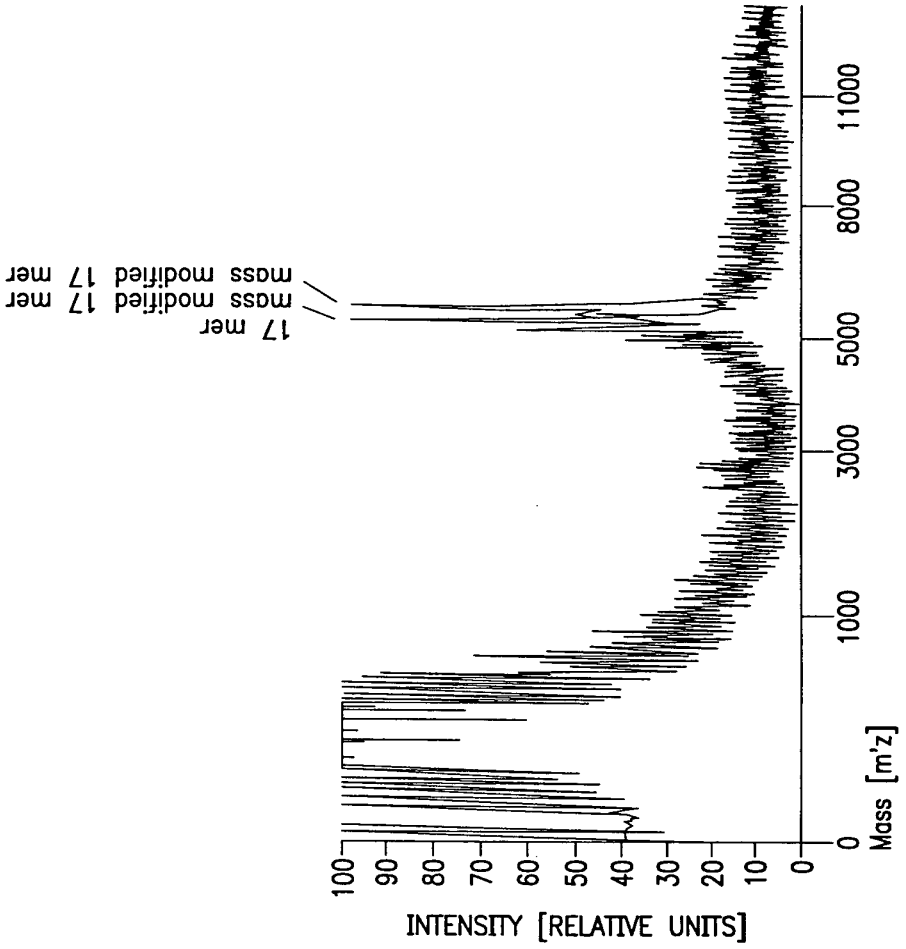


FIG. 16